



## **Smart Grid Data Hub**

### **Instructions for Data Submission**

#### ***Manual Upload***

### **Overview**

This document describes how projects funded under the Smart Grid Investment Grant (SGIG) and Smart Grid Demonstration Projects (SGDP) programs can manually submit their metrics and benefits data.

### ***Login ID and Password***

As a user of the system you will be given an account and system credentials once your Metrics and Benefits Reporting Plans (MBRP) are approved. Your credentials comprise a login ID and a password.

- IDs will be assigned and sent via e-mail to the prime project contact upon completion of the MBRP.
- The prime contact can request that others be added to the approved list.
- IDs will be given to these additional people via e-mail.
- Users can create their own passwords once IDs are provided.

Your account is associated with one or more projects. You will only be able to upload data associated with your projects.

If you are the prime contact for your project and do not have your system credentials, you may request an ID and password by sending an email to [project-admin@smartgrid.gov](mailto:project-admin@smartgrid.gov).

### ***Data Submission Process Overview***

The general process for data submission includes:

- The data are collected and recorded in either PDF form or an XML document
- The data are uploaded to the Data Hub. As the data are uploaded they are checked for basic form errors such as missing required data, letters in number only fields, etc. Submissions that do not pass the check are not accepted. Details of this process are outlined below.
- Once the data are received by the Data Hub they are in a “Submitted” state. A reviewer will screen the data to ensure that it is reasonable. For example if your

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project only has 10,000 households but your data show that you installed 100,000 meters the reviewer would flag it as a potential error and ask for clarification.

- The reviewer either accepts the data or returns the submission to the user for clarification or correction. If the data is returned to the user in a “reviewed” state, the user must make the correction and upload the data again (step 2).
- Once the reviewer has accepted the data it become available in the Data Hub reporting structure. In most cases the process stops here.
- If someone on your project team finds errors in the reported data, contact the reviewer and asks for the submission to be placed in the “reviewed” status as noted in step 4. This allows you to submit the corrected data.

### ***Possible Submission States***

A submission is in one of four possible states depending on where it is in the process:

- **Pending submission** –There has been no data submitted.
- **Submitted** -- Data have been submitted, have passed an automatic check for errors and omissions, and is ready to be reviewed.
- **Reviewed** -- The reviewer has checked the data for internal consistency and has returned the data to the user for clarification or correction.
- **Accepted** -- The reviewer has checked the data for internal consistency and reviewer questions have been satisfactorily addressed by the project team. The data is released for analysis.

*Note: A user may only submit data if the submission is in the “Pending Submission” or “Reviewed” state. The data may not be modified if they are classified as “Submitted” or “Accepted.”*

## **Initial Setup**

When you first receive your system credentials, you must log into the system and change your password.

1. Open your browser.
2. Go to <https://projects.smartgrid.gov/>. The login page will be displayed.

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**Log In**

Username:

Password:

[Forgot your password?](#)

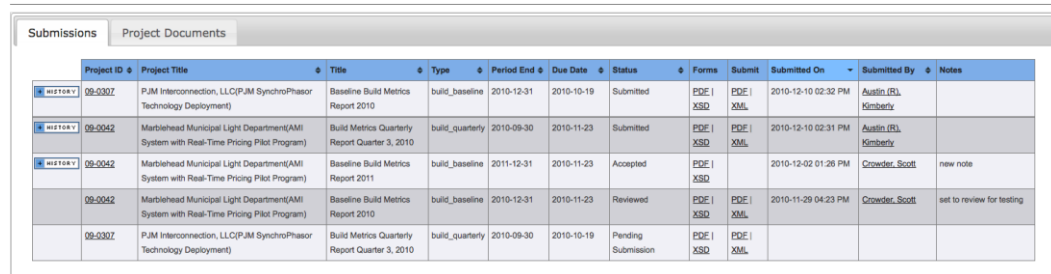
Figure 1. Log in screen.

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3. Enter your credentials and click "Ok." The user console will be displayed.

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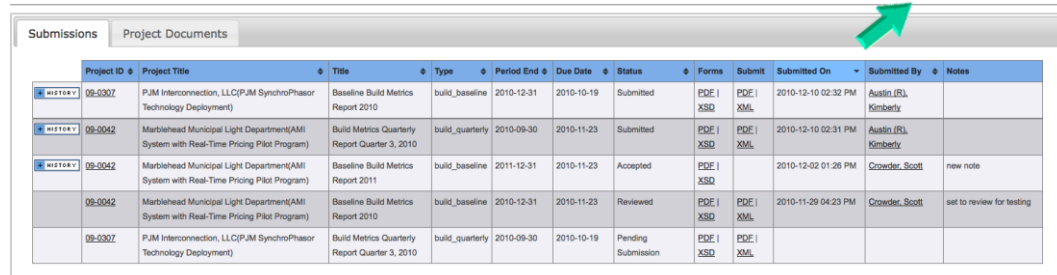
Project ID	Project Title	Title	Type	Period End	Due Date	Status	Forms	Submit	Submitted On	Submitted By	Notes
09-0307	PJM Interconnection, LLC(PJM SynchroPhasor Technology Deployment)	Baseline Build Metrics Report 2010	build_baseline	2010-12-31	2010-10-19	Submitted	PDE   XSD	PDE   XML	2010-12-10 02:32 PM	Austin,RL Kimberly	
09-0042	Marblehead Municipal Light Department(AMI System with Real-Time Pricing Pilot Program)	Build Metrics Quarterly Report Quarter 3, 2010	build_quarterly	2010-09-30	2010-11-23	Submitted	PDE   XSD	PDE   XML	2010-12-10 02:31 PM	Austin,RL Kimberly	
09-0042	Marblehead Municipal Light Department(AMI System with Real-Time Pricing Pilot Program)	Baseline Build Metrics Report 2011	build_baseline	2011-12-31	2010-11-23	Accepted	PDE   XSD	PDE   XML	2010-12-02 01:26 PM	Crowder,Scott	new note
09-0042	Marblehead Municipal Light Department(AMI System with Real-Time Pricing Pilot Program)	Baseline Build Metrics Report 2010	build_baseline	2010-12-31	2010-11-23	Reviewed	PDE   XSD	PDE   XML	2010-11-29 04:23 PM	Crowder,Scott	set to review for testing
09-0307	PJM Interconnection, LLC(PJM SynchroPhasor Technology Deployment)	Build Metrics Quarterly Report Quarter 3, 2010	build_quarterly	2010-09-30	2010-10-19	Pending Submission	PDE   XSD	PDE   XML			

Figure 2. User console display.

4. Click the "Settings" link in the upper right corner.

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Project ID	Project Title	Title	Type	Period End	Due Date	Status	Forms	Submit	Submitted On	Submitted By	Notes
09-0307	PJM Interconnection, LLC(PJM SynchroPhasor Technology Deployment)	Baseline Build Metrics Report 2010	build_baseline	2010-12-31	2010-10-19	Submitted	PDE   XSD	PDE   XML	2010-12-10 02:32 PM	Austin,RL Kimberly	
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Figure 3. User console display with "Settings" link indicated.

5. Enter your new password in the "New Password" and "Confirm New Password" fields and click "Submit."

Username	jlyndon_a
First Name	Jackie
Last Name	Lyndon
Email Address	jli_a@example.com
Role	ADMIN
New Password	
Confirm New Password	

Submit

Figure 4. "Settings" display with sample data indicated.

6. If the change was successful, you will see an "Updated" message.
7. If there was an error, a message will be displayed. Correct the error and click "Submit" again.

When you have completed the password change, your initial setup is completed.

## Submitting Metrics and Benefits Data

The diagram below shows how to submit metrics and benefits data. The following sections will describe the various routes through the process.

## Data Hub Instructions -- Manual Data Submission

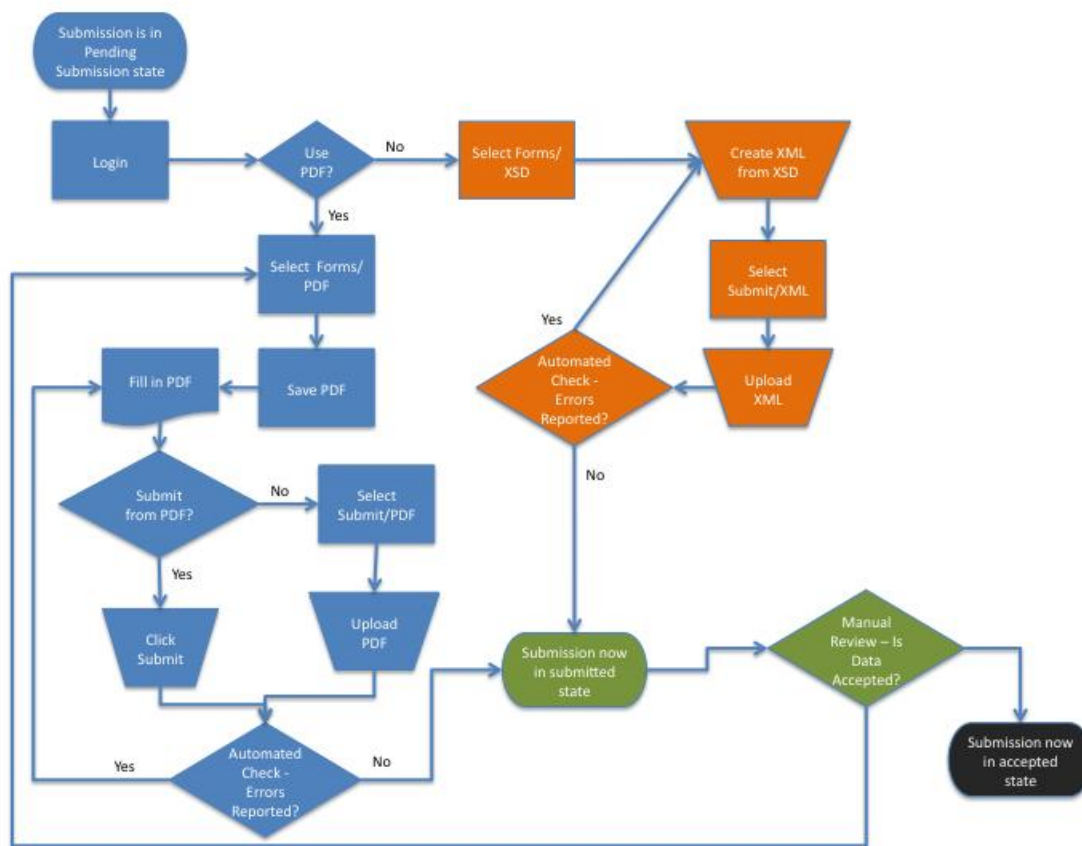


Figure 5: Data Submission Process Diagram

### ***Gathering Preliminary Information***

Before you begin, make sure you know the following details:

- **The project ID for each project on which you are reporting.** Project IDs will be provided with your login ID and password. If you do not know your project ID, please contact the program administrator at [project-admin@smartgrid.gov](mailto:project-admin@smartgrid.gov).
- **The type of data you are submitting.** Data types are listed in the project MBRP. Build and impact are two examples of data type.
- **The period-end date for the submission.** Period end dates are specified in the MBRP. One example is the January - March 2012 quarter.

### ***Log In***

1. Open your browser.
2. Go to <https://projects.smartgrid.gov/>. The login page will be displayed.
3. Enter your credentials and click "Ok." The user console will be displayed.
4. Locate the submission that you want to file

## Data Hub Instructions -- Manual Data Submission

### Locate the Submission

The user console will display a list of the submissions for the project(s) you are associated with similar to the list shown in Figure 6.

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
Submissions		Project Documents										
	Project ID	Project Title	Title	Type	Period End	Due Date	Status	Forms	Submit	Submitted On	Submitted By	Notes
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Figure 6: Submission List

Locate the submission you want to file. Verify that it has the correct period-end date and submission. Verify that it is in "Pending Submission" or "Reviewed" status. If the submission is not in "Pending Submission" or "Reviewed" status, you will not be able to upload your data.

Once you have located the submission in the list on the screen, you will choose to either submit your data in a PDF form or an XML document as shown in Figure 1.

### PDF Submission

The PDF option presents you with a downloadable form to fill out and submit. You will download a PDF file, fill it out, and submit it to the system. The PDF option requires the Adobe Acrobat Reader (or a similar tool) be installed on your computer. The Adobe Acrobat Reader may be downloaded at <http://get.adobe.com/reader/>.

Once you have located the submission that you want to file and verified the status and period-end date:

1. Click on the PDF link under the "Forms" column and download the PDF.

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Submissions

Project Documents




	Project ID	Project Title	Title	Type	Period End	Due Date	Status	Forms	Submit	Submitted On	Submitted By	Notes
 HISTORY	09-0307	PJM Interconnection, LLC(PJM SynchroPhasor Technology Deployment)	Baseline Build Metrics Report 2010	build_baseline	2010-12-31	2010-10-19	Submitted	<a href="#">PDE   XSD</a>	<a href="#">PDE   XML</a>	2010-12-10 02:32 PM	Austin (RL Kimberly)	
 HISTORY	09-0042	Marblehead Municipal Light Department(AMI System with Real-Time Pricing Pilot Program)	Build Metrics Quarterly Report Quarter 3, 2010	build_quarterly	2010-09-30	2010-11-23	Submitted	<a href="#">PDE   XSD</a>	<a href="#">PDE   XML</a>	2010-12-10 02:31 PM	Austin (RL Kimberly)	
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Figure 7. User console display with PDF link indicated.

2. Open the PDF with the Adobe Acrobat Reader.

## Data Hub Instructions -- Manual Data Submission

3. Fill out all the required fields in the PDF document.
4. Save and close the document

You may save and close the document as often as you wish. You may pass the document on to other members of your team to complete if you do not have all the necessary data. Once all the data has been entered you can upload the data either by using the embedded "Submit" button or by using the PDF Upload method.

### Submitting the PDF Using the Embedded Submit Button

To submit the data from an open PDF document, use the "Submit" button embedded in the PDF document:

1. Open the PDF using Adobe Acrobat Reader.
2. Scroll down to the last page. You may want to verify that the data in the document are correct.
3. Click the "Submit" button at the bottom of the last page.

AMI Installed Costs	Project Funded	Cost Share	Total Spending
Back Office Systems	\$5,000.00	\$6,000.00	\$11,000.00
Communications Equipment	\$25,000.00	\$30,000.00	\$55,000.00
AMI Smart Meters	\$50,000.00	\$40,000.00	\$90,000.00
Other Costs	\$0.00	\$0.00	\$0.00
Other Cost Description			

Submit

Print Form

Figure 8. Submitting a PDF using the embedded submit button.

4. The PDF document will check for missing data and other errors. If any errors are reported, fix them in the document and repeat step 4.
5. If there are no errors you will be asked for your user name and password.
6. The PDF will be submitted to the Data Hub. The Data Hub will then verify that the submission needs to be filed and that the submitted data are of the correct form (e.g.; numbers are listed in number fields, dates are listed in date fields, etc.)
7. If there are errors, Adobe Acrobat Reader will display a new PDF document describing what the errors are. Switch back to the submission PDF, correct the data errors and click on the Submit" button at the bottom of the form (Step 4).
8. If there are no errors, Adobe Acrobat Reader will display a new PDF document that reads "Created Submission:" followed by a number.
9. The status of the submission will automatically change to "Submitted".

At this point you have successfully submitted the data and may log out or submit more data for your project(s). You may save and close the submission PDF.

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### Submitting the PDF Using PDF Upload

To upload data from a saved PDF file on your system:

1. Log in to the Smart Grid Data Hub.
2. Locate the submission that you want to file.
3. Click on the PDF link under the "Submit" column. This will start the upload of the PDF to the Data Hub.

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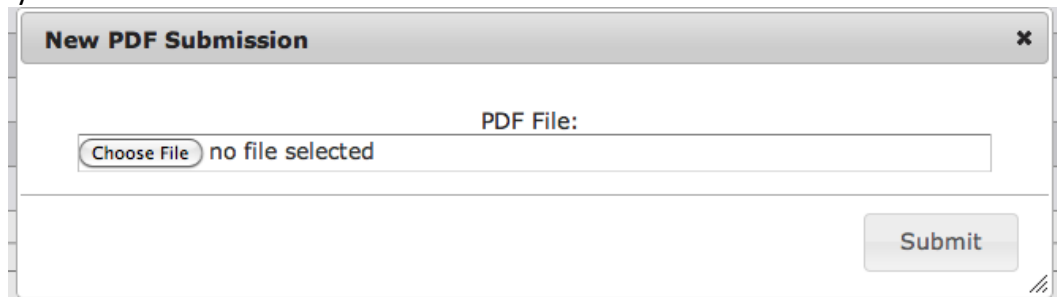
Submissions

Project Documents

	Project ID	Project Title	Title	Type	Period End	Due Date	Status	Forms	Submit	Submitted On	Submitted By	Notes
<a href="#">History</a>	09-0302	PJM Interconnection, LLC(PJM SynchroPhasor Technology Deployment)	Baseline Build Metrics Report 2010	build_baseline	2010-12-31	2010-10-19	Submitted	<a href="#">PDE</a>   <a href="#">XSD</a>   <a href="#">XML</a>	<a href="#">PDE</a>   <a href="#">XSD</a>   <a href="#">XML</a>	2010-12-10 02:32 PM	<a href="#">Austin (R), Kimberly</a>	
<a href="#">History</a>	09-0042	Marblehead Municipal Light Department(AMI System with Real-Time Pricing Pilot Program)	Build Metrics Quarterly Report Quarter 3, 2010	build_quarterly	2010-09-30	2010-11-23	Submitted	<a href="#">PDE</a>   <a href="#">XSD</a>   <a href="#">XML</a>	<a href="#">PDE</a>   <a href="#">XSD</a>   <a href="#">XML</a>	2010-12-10 02:31 PM	<a href="#">Austin (R), Kimberly</a>	
<a href="#">History</a>	09-0042	Marblehead Municipal Light Department(AMI System with Real-Time Pricing Pilot Program)	Baseline Build Metrics Report 2011	build_baseline	2011-12-31	2010-11-23	Accepted	<a href="#">PDE</a>   <a href="#">XSD</a>   <a href="#">XML</a>	<a href="#">PDE</a>   <a href="#">XSD</a>   <a href="#">XML</a>	2010-12-02 01:26 PM	<a href="#">Crowder, Scott</a>	new note
	09-0042	Marblehead Municipal Light Department(AMI System with Real-Time Pricing Pilot Program)	Baseline Build Metrics Report 2010	build_baseline	2010-12-31	2010-11-23	Reviewed	<a href="#">PDE</a>   <a href="#">XSD</a>   <a href="#">XML</a>	<a href="#">PDE</a>   <a href="#">XSD</a>   <a href="#">XML</a>	2010-11-29 04:23 PM	<a href="#">Crowder, Scott</a>	set to review for testing
	09-0302	PJM Interconnection, LLC(PJM SynchroPhasor Technology Deployment)	Build Metrics Quarterly Report Quarter 3, 2010	build_quarterly	2010-09-30	2010-10-19	Pending Submission	<a href="#">PDE</a>   <a href="#">XSD</a>   <a href="#">XML</a>	<a href="#">PDE</a>   <a href="#">XSD</a>   <a href="#">XML</a>			

Figure 9. User console display with PDF link indicated.

4. Your browser will open a window and allow you to select the PDF from your system.



**New PDF Submission** [X]

PDF File:

Choose File no file selected

Submit

Figure 10. Choosing PDF file to upload.

5. If there are errors, you will see an error dialog box that will describe the errors.
  - a. Open the PDF document with the Adobe Acrobat Reader.
  - b. Correct the data in error.
  - c. Save the document.
  - d. Return to step 3.
6. If there are no errors you will see a dialog box that says "Created Submission:" followed by a number.
7. The status of the submission will automatically change to "Submitted".

At this point you have successfully submitted the data and may log out or upload more data for your project(s).

### XML Submission

The XML submission is intended for users who have a strong understanding of XML document creation and validation. This document does not cover the specifics of creating and validating XML documents.

Start by downloading the XML Schema Document (XSD). The XSD is used to validate the XML document. In addition, it is used by some tools to assist in the creation of the XML document.

1. Log in to the Smart Grid Data Hub.
2. Click on the XSD link under the "Forms" column. This will download the XSD file to your system.

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Submissions

Project Documents




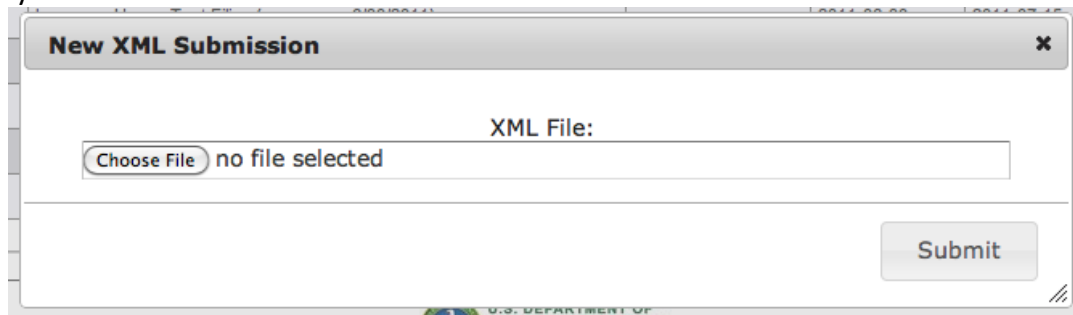
	Project ID	Project Title	Title	Type	Period End	Due Date	Status	Forms	Submit	Submitted On	Submitted By	Notes
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Figure 11. User console display with XML link indicated.

At this point you will likely log out of the Smart Grid Data Hub while you create your XML document using the XSD file and your XML editing program. (The process to create and validate such a document is beyond the scope of this document.) Once your XML file is created and saved, log in to the Smart Grid Data Hub and proceed.

3. Click on the corresponding XML link under the "Submit" column.
4. Your browser will open a window and allow you to select the XML file from your system.



**New XML Submission**

XML File:

Choose File no file selected

Submit

Figure 12. Choosing the XML file to upload.

5. If there are errors, you will see an error dialog box that will describe the errors.
  - a. Open the XML document in your XML editor.



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- b. Correct the error(s) and save the document.
  - c. Use the XSD to validate the document.
  - d. Return to step 3 above.
6. If there are no errors you will see a dialog box that says "Created Submission:" followed by a number.
7. The status of the submission will automatically change to "Submitted".

At this point you have successfully submitted the data and may log out or upload more data for your project(s).

## Correcting Errors

Occasionally a submission will be returned by a reviewer for further clarification or correction. A reviewer may return a submission for any number of reasons related to data quality and reasonableness. When the reviewer returns the submission, he or she is expected to explain why the submission was returned. Returned submissions have a state of "Reviewed."

To locate submissions with issues:

1. Log in to the Smart Grid Data Hub.
2. Click on the "Status" column header. The submissions will be sorted by status.

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Submissions		Project Documents											
	Project ID	Project Title	Title	Type	Period End	Due Date	Status	Forms	Submit	Submitted On	Submitted By	Notes	
<a href="#">history</a>	09-0307	PJM Interconnection, LLC(PJM SynchroPhasor Technology Deployment)	Baseline Build Metrics Report 2010	build_baseline	2010-12-31	2010-11-23	Submitted	PDE   XSD   XML	PDE   XSD   XML	2010-12-10 02:32 PM	Austin (RL, Kimberly)		
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Figure 13. User console display showing status of projects.

3. Locate the "Reviewed" section.
4. The "Reviewer Notes" should specify the issues with the submission.
5. Click on the PDF link under the "Forms" column. This will download the PDF to your system.
6. Open the PDF with the Adobe Acrobat Reader.
7. Correct the fields that have issues.
8. Resubmit the PDF using one of the PDF submission methods explained above.